



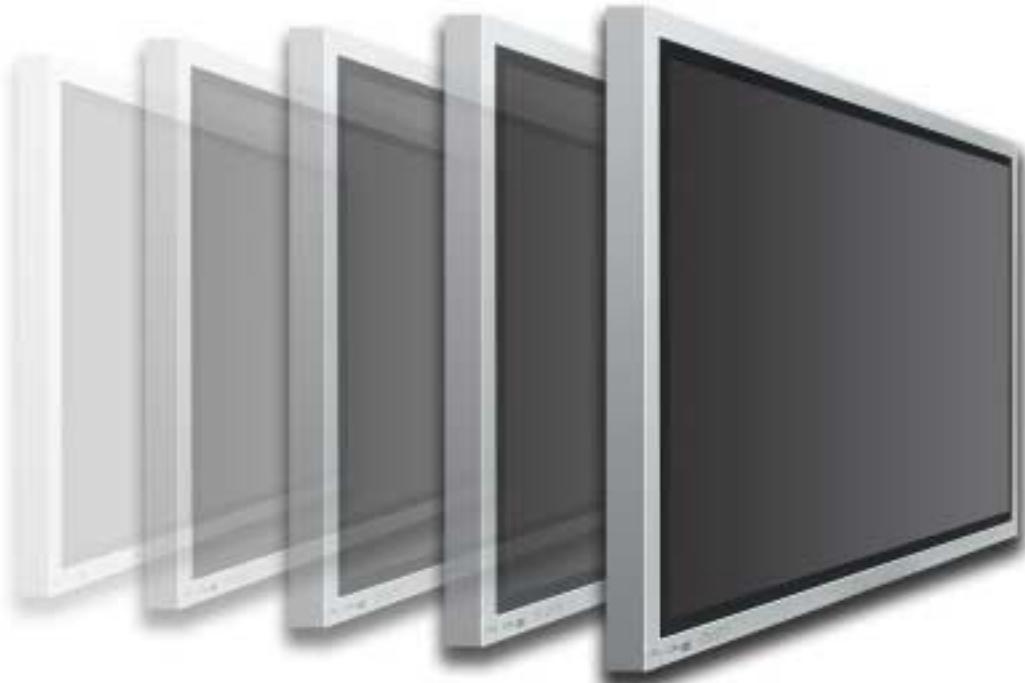
YAMAHA

R



PDM-1

HIGH DEFINITION PLASMA MONITOR



Operating Instructions

English

TQZW251

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Important Safety Notice

WARNING: To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.
Do not place containers with water (flower vase, cups, cosmetics, etc.) above the set.
(including on shelves above, etc.)

WARNING: 1) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
2) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.
Do not defeat the purpose of the earthing plug.

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case you may be required to take adequate measures.

CAUTION

This appliance is intended for use in environments which are relatively free of electromagnetic fields. Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear. To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

To prevent electric shock, ensure the grounding pin on the AC cord power plug is securely connected.

Trademark Credits

- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.
Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.

Note:

Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the plasma display.

Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

Safety Precautions

WARNING

Setup

This plasma display is for use only with the following optional accessories. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.

- Pedestal PDS-150
- Wall Mounting Unit PWK-150
- Speakers SP-PDM1

(In the case of connecting the speakers directly with the speaker terminals of the plasma display)

Always be sure to ask a qualified technician to carry out set-up.

Do not place the plasma display on sloped or unstable surfaces.

- The plasma display may fall off or tip over.

Do not place any objects on top of the plasma display.

- If water or spills onto the plasma display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the plasma display, please consult your local Yamaha dealer.

If using the pedestal (optional accessory), leave a space of at least 10 cm at the top, left and right, at least 6 cm at the bottom, and at least 7 cm at the rear. If using some other setting-up method, leave a space of at least 10 cm at the top, bottom, left and right, and at least 1.9 cm at the rear.

Avoid installing this product near electronic equipment that is easy to receive electromagnetic waves.

- It may cause interference in image, sound, etc. In particular, keep video equipment away from this product.

When using the plasma display

The plasma display is designed to operate on 220 - 240 V AC, 50/60 Hz.

Do not cover the ventilation holes.

- Doing so may cause the plasma display overheat, which can cause fire or damage to the plasma display.

Do not stick any foreign objects into the plasma display.

- Do not insert any metal or flammable objects into the ventilation holes or drop them onto the plasma display, as doing so can cause fire or electric shock.

Do not remove the cover or modify it in any way.

- High voltages which can cause severe electric shocks are present inside the plasma display. For any inspection, adjustment and repair work, please contact your local Yamaha dealer.

Securely insert the power cord plug as far as it will go.

- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket plate is loose, they shall not be used.

Do not handle the power cord plug with wet hands.

- Doing so may cause electric shocks.

Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.

- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Yamaha dealer.

If the plasma display is not going to be used for any prolonged length of time, unplug the power cord plug from the wall outlet.

Safety Precautions

If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the plasma display, immediately unplug the power cord plug from the wall outlet.

- If you continue to use the plasma display in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Yamaha dealer so that the necessary repairs can be made. Repairing the plasma display yourself is extremely dangerous, and shall never be done.

If water or foreign objects get inside the plasma display, if the plasma display is dropped, or if the cabinet becomes damaged, disconnect the power cord plug immediately.

- A short circuit may occur, which could cause fire. Contact your local Yamaha dealer for any repairs that need to be made.

CAUTION

When using the plasma display

Do not bring your hands, face or objects close to the ventilation holes of the plasma display.

- Heated air comes out from the ventilation holes at the top of plasma display will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

Be sure to disconnect all cables before moving the plasma display.

- If the plasma display is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

Disconnect the power cord plug from the wall socket as a safety precaution before carrying out any cleaning.

- Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it becoming dusty.

- If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire. Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

This Plasma Display radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma Display.

Cleaning and maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water to which a small amount of neutral detergent has been added, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

If the cabinet becomes dirty, wipe it with a soft, dry cloth.

- If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the plasma display. If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.

Accessories

Accessories Supply

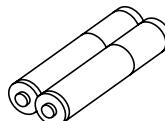
Check that you have the accessories and items shown



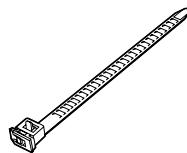
Remote Control
Transmitter



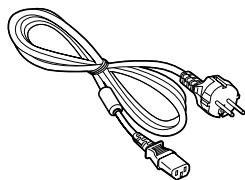
Batteries for the
Remote Control
Transmitter
(2 × R6 Size)



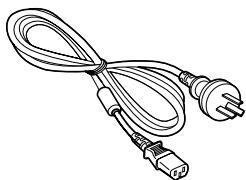
Fixing bands
2 pcs



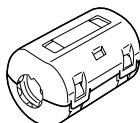
AC cord



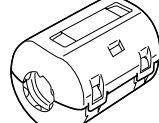
AC cord
(Australia)



Ferrite core
(small size) × 1

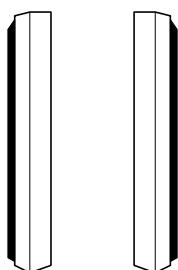


Ferrite core
(large size) × 2

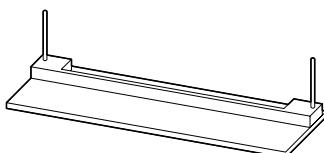


Optional Accessories

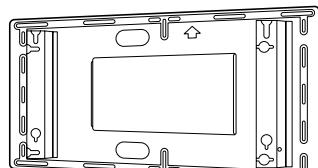
- Speakers
SP-PDM1
(Special order products)



- Pedestal
PDS-150



- Wall Mounting Unit
PWK-150



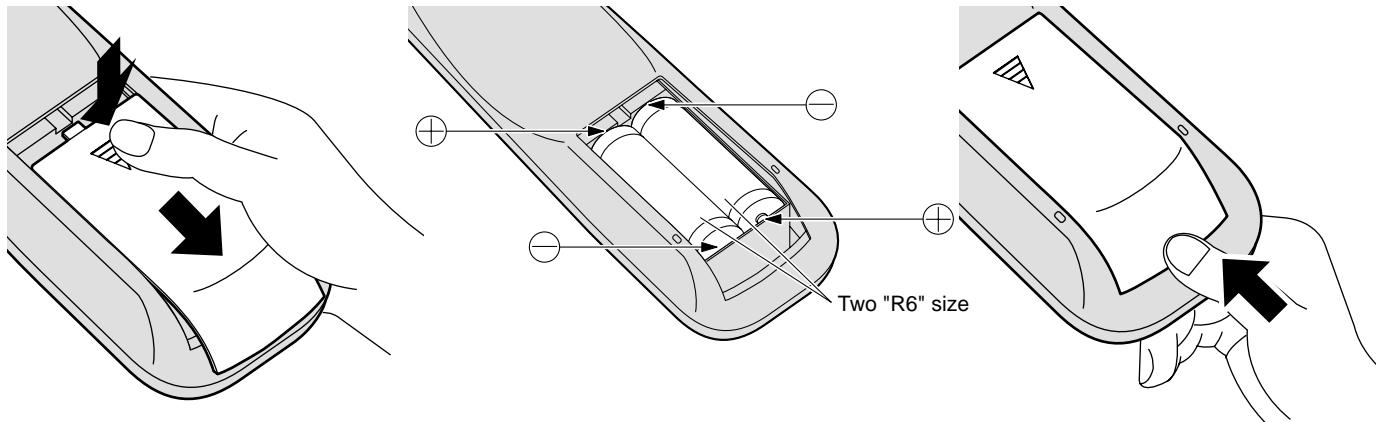
For assembling

Full instructions are supplied with each optional accessory for use with this plasma display.

Remote Control Batteries

Requires two R6 batteries.

1. Turn the transmitter face down. Press and slide off the battery cover.
2. Install the batteries as shown in the battery compartment. (Polarity + or – must match the markings in the compartment.)
3. Replace the cover and slide in reverse until the lock snaps.



Helpful Hint:

For frequent remote control users, replace old batteries with Alkaline batteries for longer life.

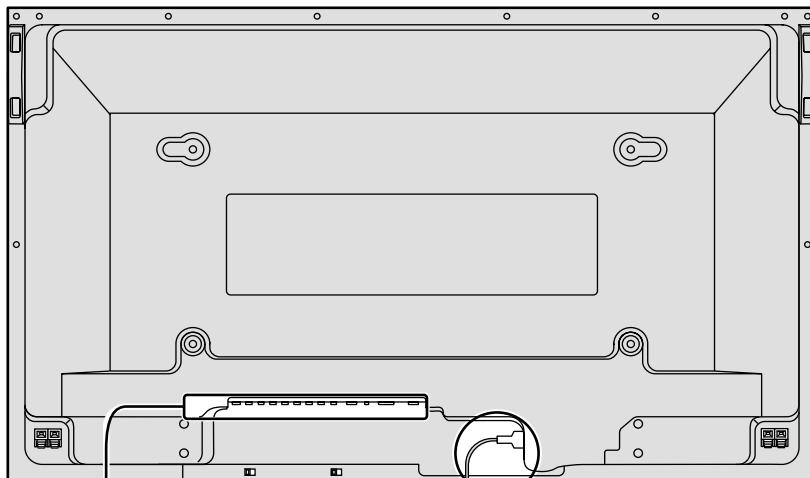
⚠ Precaution on battery use

Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter.

Observe the following precaution:

1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: "Zinc Carbon" with "Alkaline").
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the plasma display set.

Connections

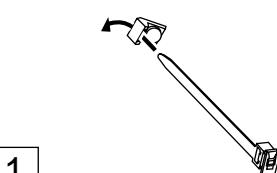


AC cord connection (see page 18)

– Cable fixing bands

Secure any excess cables with bands, as required.

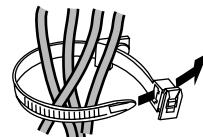
Pass the attached cable fixing band through the clip as shown in the figure.



1

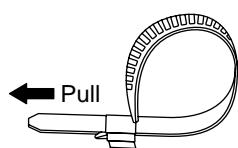
To secure cables connected to Terminals, wrap the cable fixing band around them then pass the pointed end through the locking block, as shown in the figure.

While ensuring there is sufficient slack in cables to minimize stress (especially in the power cord), firmly bind all cables with the supplied fixing band.

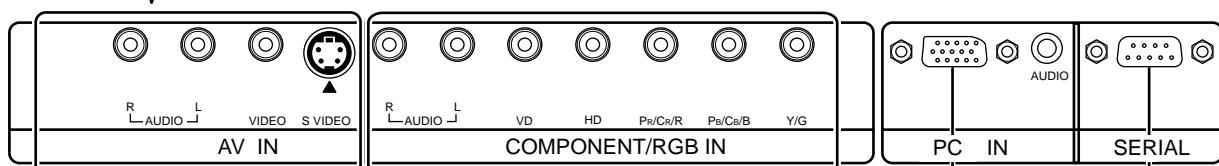
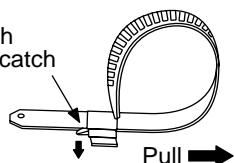


2

To tighten:



To loosen:



AV IN Terminals
(see page 10, 11)

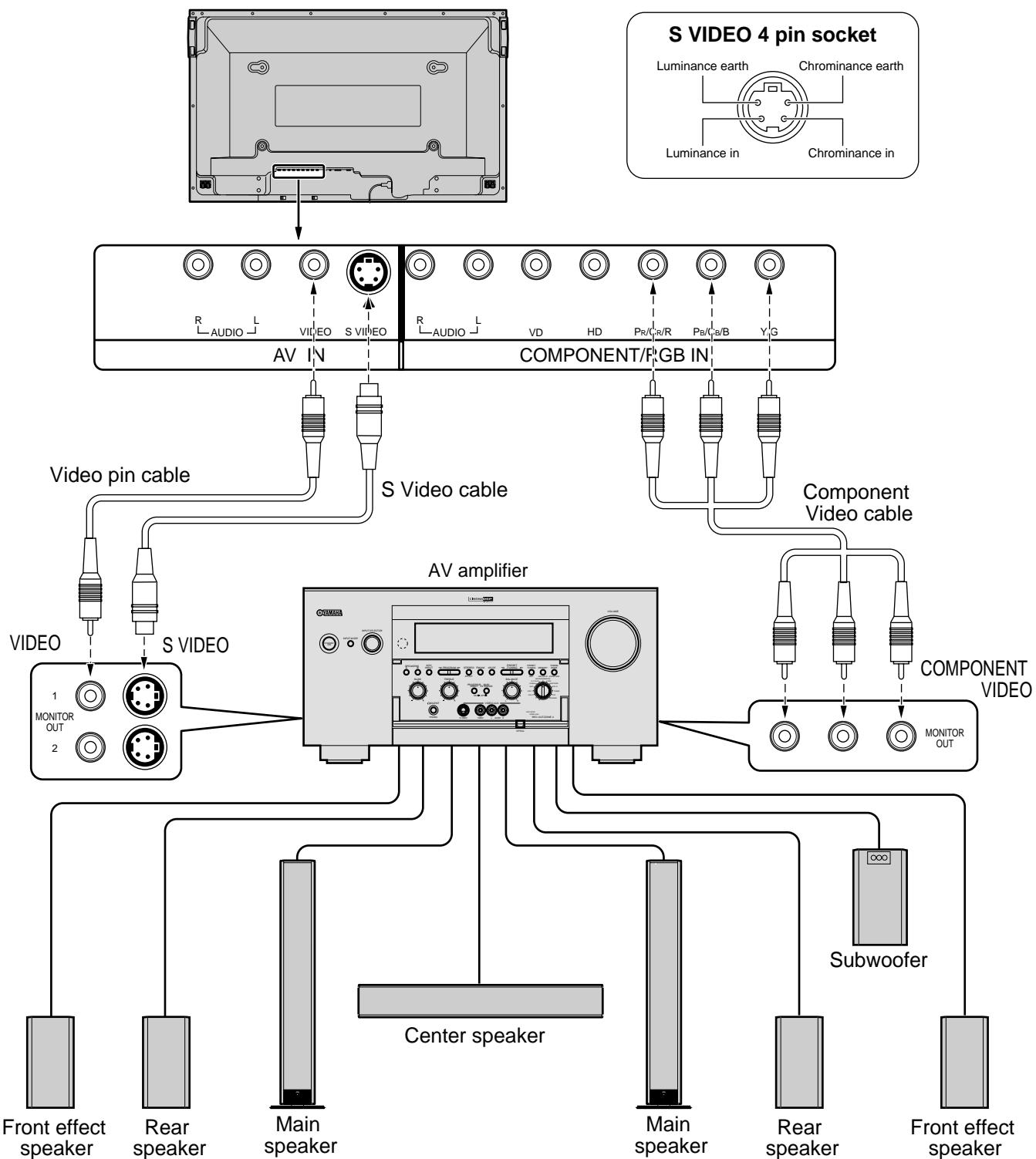
COMPONENT/RGB IN and Audio IN
Terminals (see page 10, 11, 12)

From EXIT monitor Terminal
on Computer (see page 13)

From SERIAL Terminal on
Computer (see page 15)

Basic connection

(Example) When connecting an AV amplifier



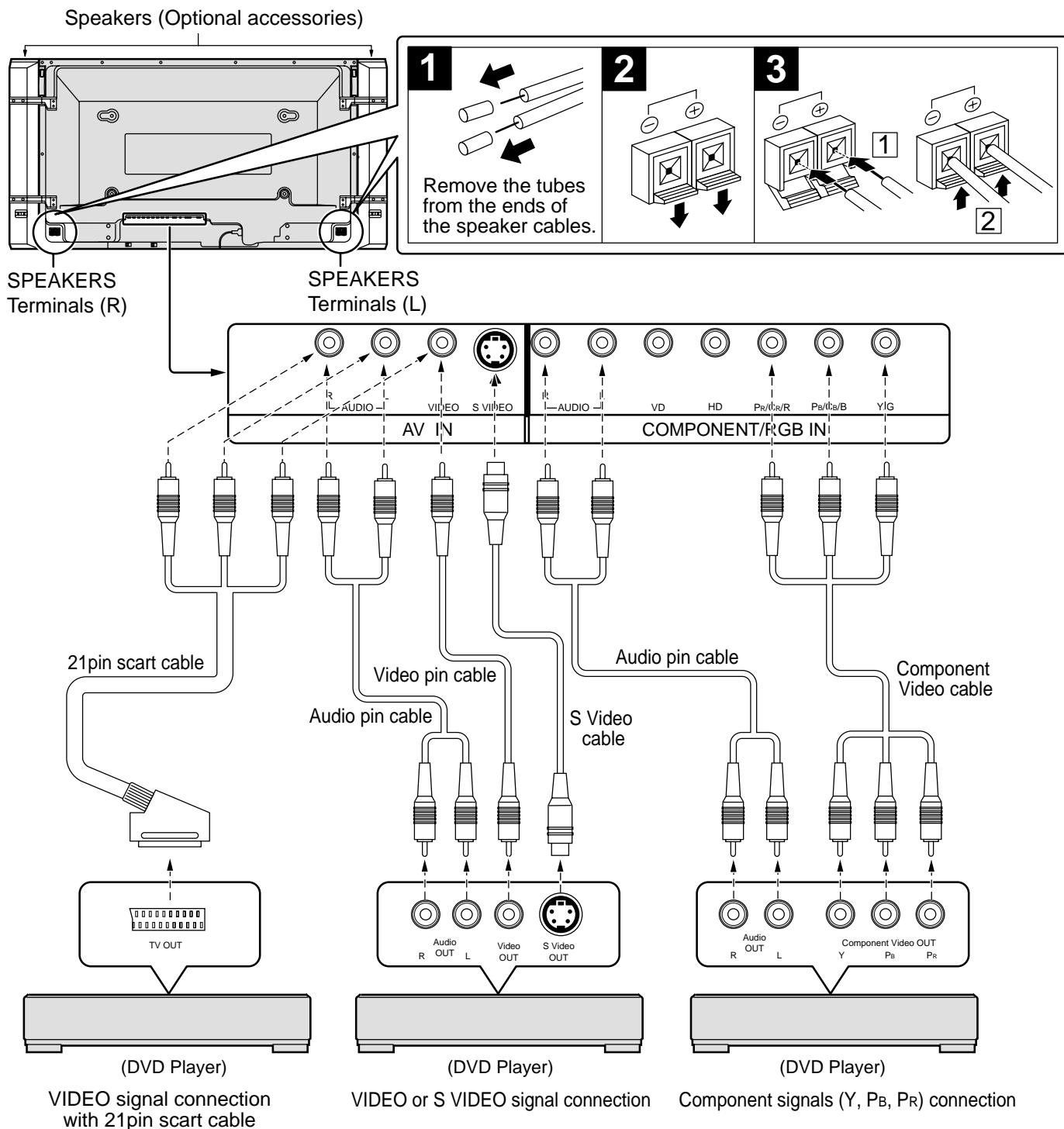
Notes:

- (1) Change the "Component/RGB-in" setting in the "Setup" menu to "Component". (see page 34)
- (2) Any equipment and cables other than the display illustrated above are not included.
- (3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.
- (4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.

Speaker Terminals connection

When you do not use an AV amplifier, connect the speakers directly with the speaker terminals of the plasma display. Refer to the speaker's Installation Manual for details on speaker installation.

When connecting the speakers, be sure to use only the optional accessory speakers.

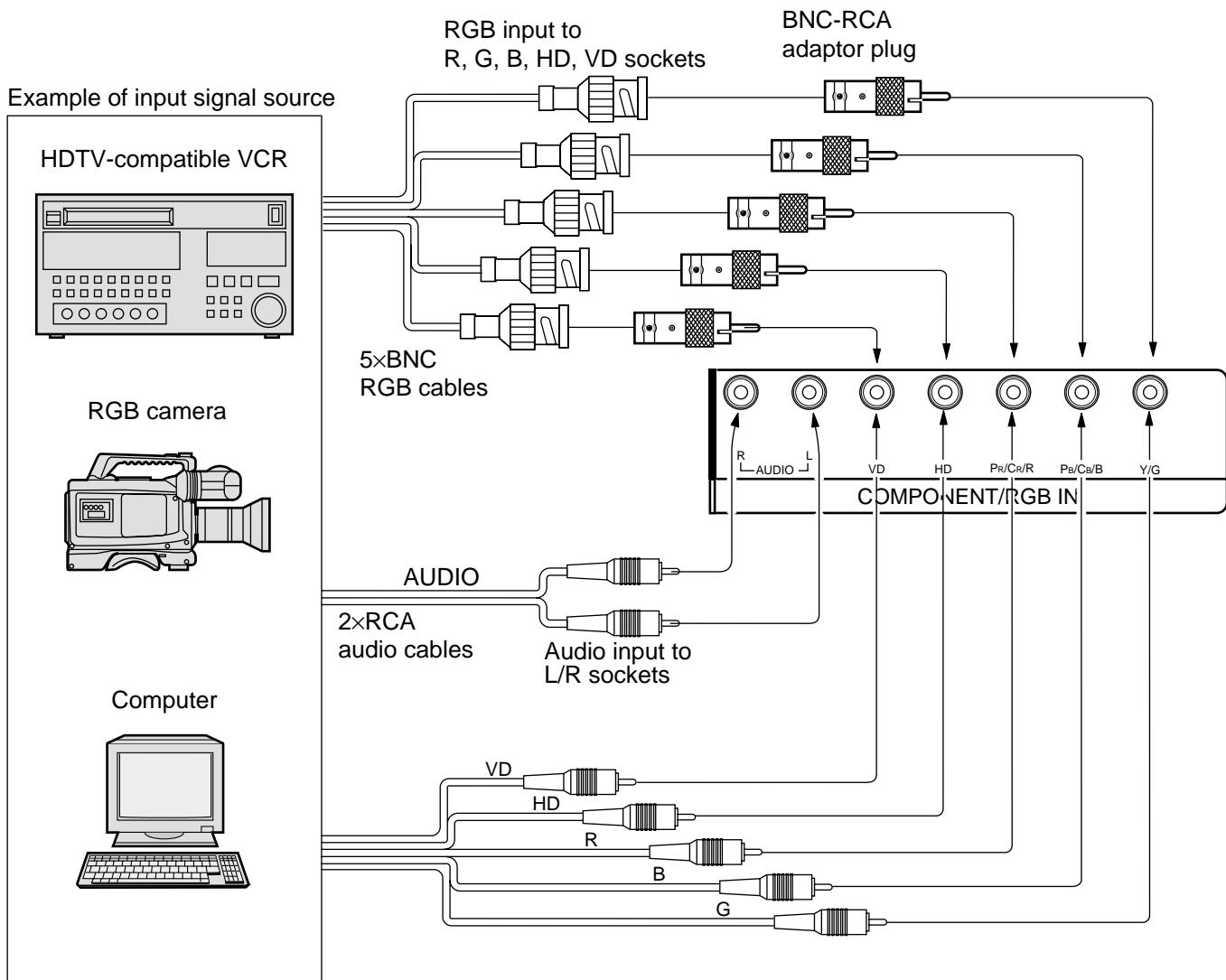


Notes:

- (1) Change the "Component/RGB-in" setting in the "Setup" menu to "Component". (see page 34)
- (2) Any equipment and cables other than the display illustrated above are not included.
- (3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.
- (4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.
- (5) When utilizing the R/G/B/Video signals from the TV OUT(SCART) terminal of a DVD player or similar, use a 4-pin cable to connect signals to the appropriate input terminal of the display.

Component/RGB Input connection

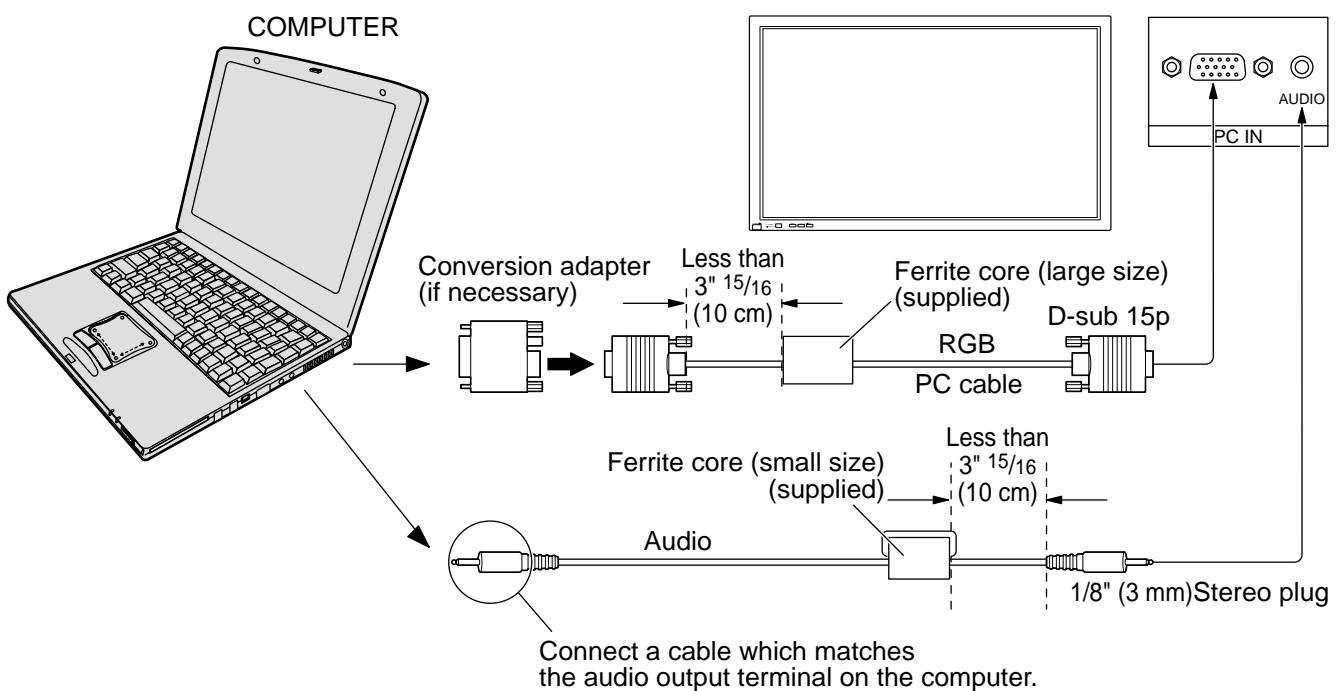
RGB signal (R, G, B, HD, VD) connection



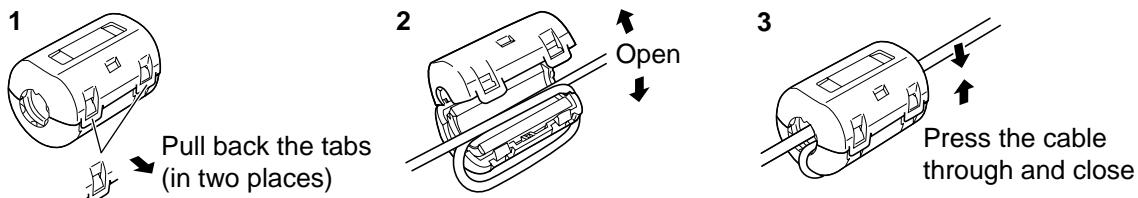
Notes:

- (1) Change the "Component/RGB-in" setting in the "Setup" menu to "RGB". (see page 34)
- (2) Any equipment and cables other than the display illustrated above are not included.
- (3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.
- (4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.

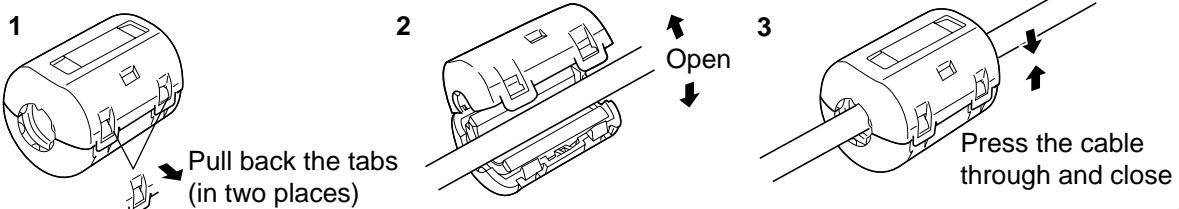
PC Input Terminals connection



Installing the ferrite core (Small size)



Installing the ferrite core (Large size)

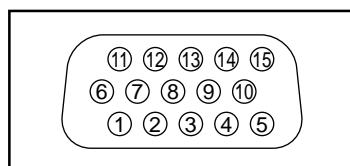


Notes:

- (1) Computer signals which can be input are those with a horizontal scanning frequency of 15.6 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- (2) The display resolution is a maximum $1,024 \times 768$ dots when the aspect mode is set to "4:3", and $1,366 \times 768$ dots when the aspect mode is set to "16:9". If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- (3) The PC input terminals are DDC1/2B-compatible. If the computer being connected is not DDC1/2B-compatible, you will need to make setting changes to the computer at the time of connection.
- (4) Some PC models cannot be connected to the set.
- (5) There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.
- (6) The computer shown in the illustration is for example purposes only.
- (7) Additional equipment and cables shown are not supplied with this set.
- (8) Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

Connections

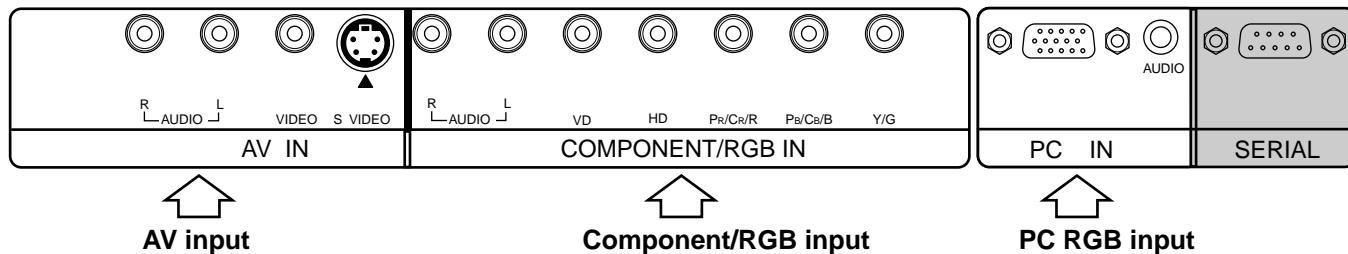
Signal Names for D-sub 15P Connector



Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	GND (Ground)
②	G	⑦	GND (Ground)	⑫	SDA
③	B	⑧	GND (Ground)	⑬	HD/SYNC
④	GND (Ground)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

AV/Component/RGB/PC input signals



AV input

	signal name	horizontal frequency(kHz)	vertical frequency(Hz)
1	NTSC	15.734	59.95
2	PAL	15.625	50
3	PAL60	15.734	59.95
4	SECAM	15.625	50
5	Modified NTSC	15.734	59.95

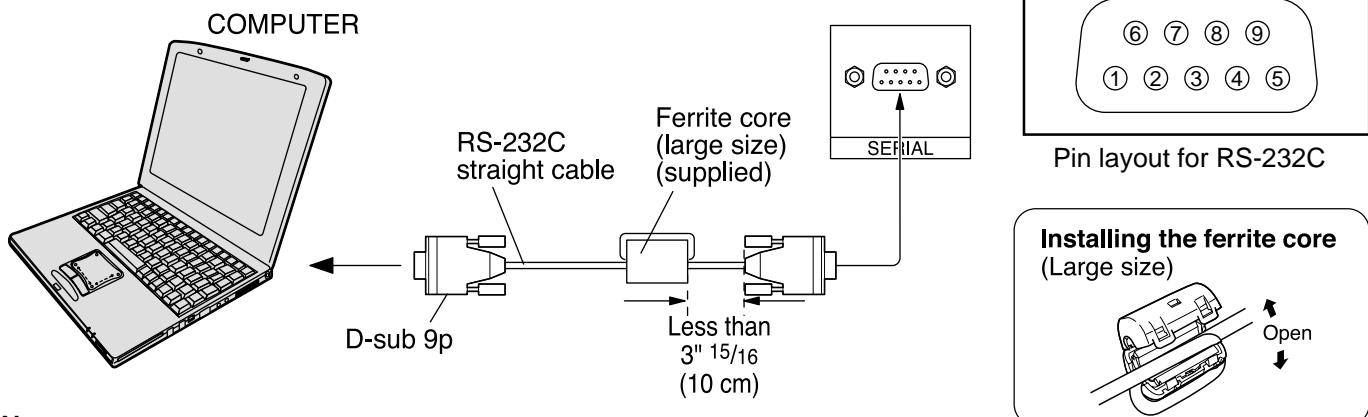
* Mark:
Input signal can be displayed.

Component/RGB/PC input

	signal name	horizontal frequency(kHz)	vertical frequency(Hz)	Component	RGB	PC
1	525 (480) /60i	15.734	59.94	*	*	*
2	625 (575) /50i	15.625	50	*	*	*
3	525 (480) /60p	31.468	59.94	*	*	
4	625 (575) /50p	31.25	50	*	*	*
5	750 (720) /60p	45	60	*	*	*
6	1,125 (1,080) /60i	33.75	60	*	*	*
7	1,125 (1,080) /50i	28.125	50	*	*	*
8	1,125 (1,080) /24p	27	24	*	*	*
9	1,125 (1,080) /24sF	27	48	*	*	*
10	640 × 400 @70	31.5	70		*	*
11	640 × 480 @60	31.5	59.94		*	*
12	Macintosh13" (640 × 480)	35	67		*	*
13	640 × 480 @75	37.5	75		*	*
14	852 × 480 @60	31.7	60		*	*
15	800 × 600 @60	37.9	60		*	*
16	800 × 600 @75	46.9	75		*	*
17	800 × 600 @85	53.7	85		*	*
18	Macintosh16" (832 × 624)	49.7	75		*	*
19	1,024 × 768 @60	48.4	60		*	*
20	1,024 × 768 @70	56.5	70		*	*
21	1,024 × 768 @75	60	75		*	*
22	1,024 × 768 @85	68.7	85		*	*
23	Macintosh21" (1,152 × 870)	68.7	75		*	*
24	1,280 × 1,024 @60	64	60		*	*
25	1,280 × 1,024 @75	80	75		*	*
26	1,280 × 1,024 @85	91.1	85		*	*
27	1,600 × 1,200 @60	75	60		*	*

SERIAL Terminals connection

The SERIAL terminal is used when the plasma display is controlled by a computer.



Notes:

- (1) Use the RS-232C cable to connect the computer to the plasma display.
- (2) The computer shown is for example purposes only.
- (3) Additional equipment and cables shown are not supplied with this set.

The SERIAL terminal conforms to the RS-232C interface specification, so that the plasma display can be controlled by a computer which is connected to this terminal.

The computer will require software which allows the sending and receiving of control data which satisfies the conditions given below. Use a computer application such as programming language software. Refer to the documentation for the computer application for details.

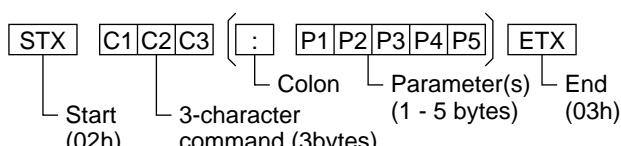
Communication parameters

Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	—

RS-232C Conversion cable	
D-sub 9-pin female	Details
②	R X D
③	T X D
⑤	GND
④ • ⑥	Non use
⑦ ⑧	Shorted
① • ⑨	NC

Basic format for control data

The transmission of control data from the computer starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order. If there are no parameters, then the parameter signal does not need to be sent.



Notes:

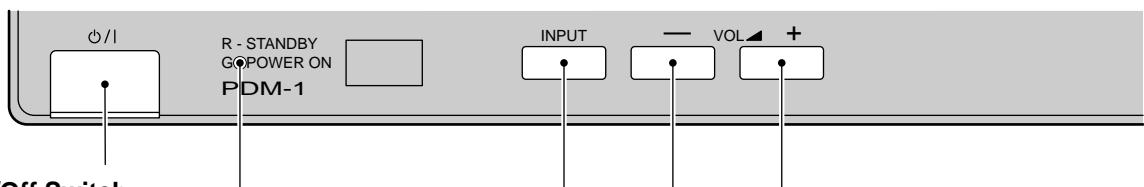
- (1) If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
- (2) If an incorrect command is sent by mistake, this unit will send an "ER401" command back to the computer.

Command

Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 00 - 63
AMT	0	Audio mute OFF
	1	Audio mute ON
IIS	None	Input select (toggle)
	VID	AV Mode
	YP1	Component / RGB mode (processed as a Y/Pb/Pr or RGB signals as set by this unit)
	RG1	PC Mode
DAM	None	Screen mode select (toggle)
	NORM	4 : 3
	ZOOM	Zoom
	FULL	16 : 9
	JUST	Just
	SELF	Auto

With the power off, this display responds to PON command only.

Basic Controls



Main Power On/Off Switch

Power Indicator

The Power Indicator will light.

- Power-OFF Indicator not illuminated (The unit will still consume some power as long as the power cord is still inserted into the wall outlet.)
- Stand-by \diamond Red
- Power-ON..... Green

INPUT button

(AV(S Video), Component/RGB and PC Mode Selection)

Press the "INPUT" button to select AV (S Video), Component/RGB and PC input signal modes sequentially.
(see page 19)

Volume Adjustment

Press the Volume Up "+" or Down "-" button to increase or decrease the sound volume level.

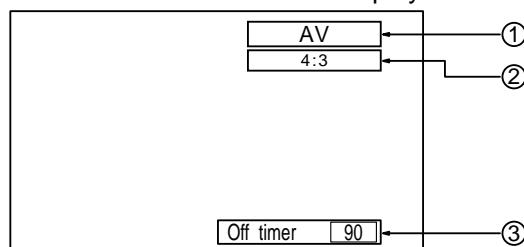
Stand-by (ON/OFF) button

The plasma display must first be plugged into the wall outlet and turned on at the power switch (see page 18).

Press this button to turn the plasma display On, from Standby mode. Press it again to turn the plasma display Off to Standby mode.

Status button

Press the "Status" button to display the current system status.



① AV(S Video), Component/RGB, PC mode

② Aspect mode (see page 22)

③ Off timer

The off timer indicator is displayed only when the off timer has been set.

N button

(see page 25, 26, 28, 29)

PICTURE button

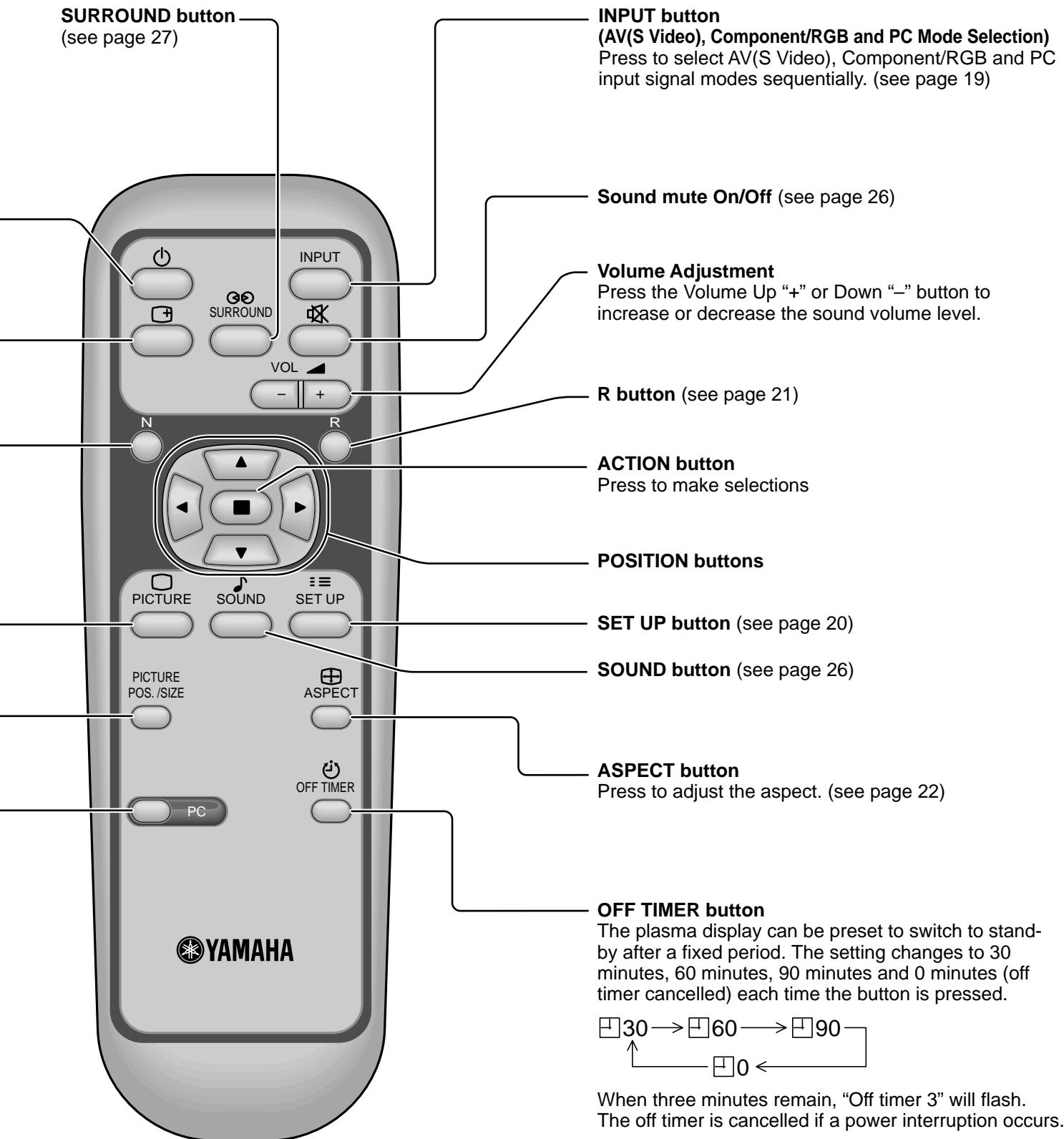
(see page 28)

PICTURE POS./SIZE button

(see page 24)

PC button

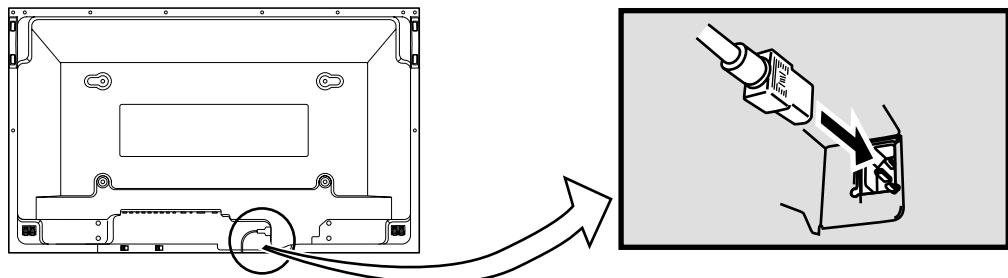
Press the "PC" mode selection button to select the PC mode. This button is used to switch directly to PC mode.



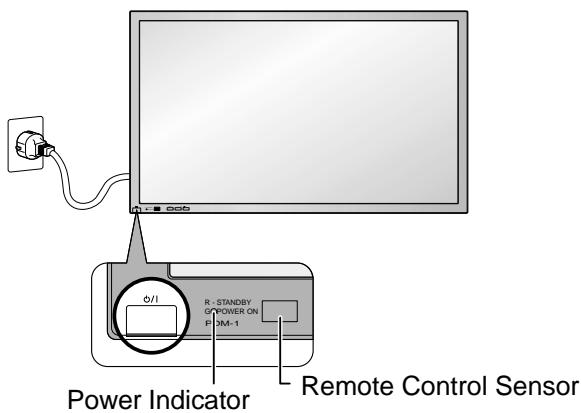
Power On/Off and input signal selection

AC cord connection

Connecting the AC cord plug to the plasma display.



Power On/Off



Connecting the plug to the Wall Outlet

Note:

Main plug types vary between countries. The power plug shown at left may, therefore, not be the type fitted to your set.

Press the  /  switch on the plasma display to turn the set on:Power-On.

Power Indicator: Green

Example: The screen below is displayed for a while after the plasma display is turned on. (setting condition is an example.)

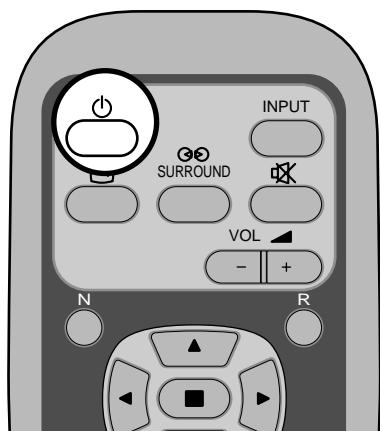
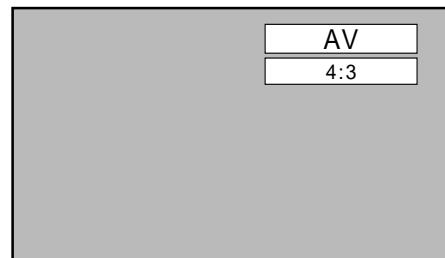
When the Power is turned on for the first time, the Language selection screen is displayed.

From the second time on, language selection can be done from the setup menu. (see page 19)

Select the desired language using the  and  keys and press the ACTION  button.



From the second time on, the below screen is displayed for a while (setting condition is an example).



Press the  button on the remote control to turn the plasma display off.

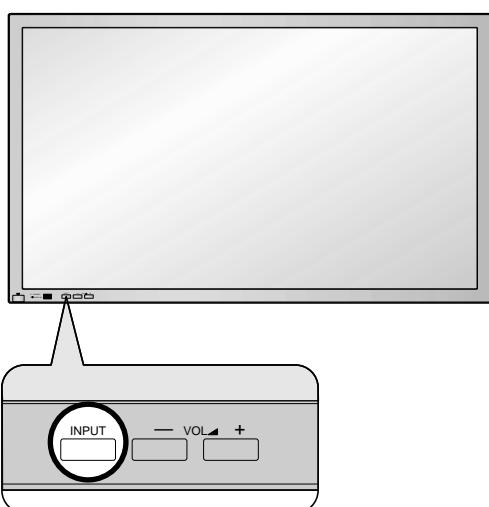
Power Indicator: Red (standby)

Press the  button on the remote control to turn the plasma display on.

Power Indicator: Green

Turn the power to the plasma display set off by pressing the  /  switch on the plasma display, when the plasma display is on or in standby mode.

Select the input signal



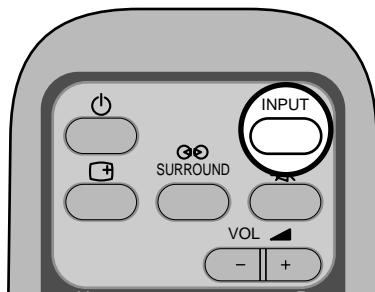
Press the INPUT button to select the input AV signal desired from equipment such as a VCR which has been connected to the plasma display.

Input signals will change as follows:

For Component Input (see page 34)



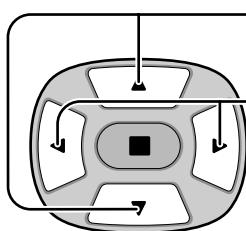
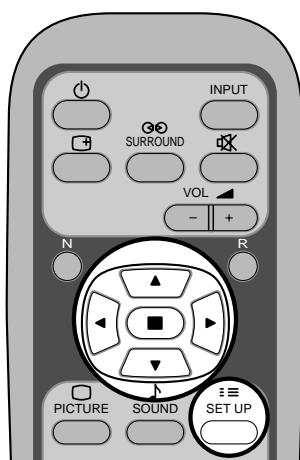
For RGB Input (see page 34)



Selecting the On-Screen Menu Language



Press to display the Setup menu.

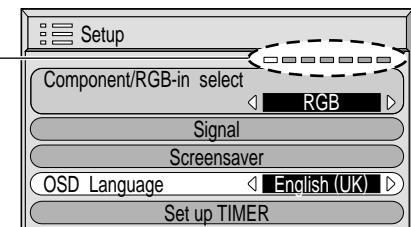


Press to select the OSD Language.

Press to select your preferred language.

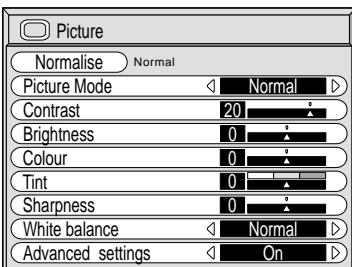
Selectable languages

English(UK) Deutsch Français Italiano Español ENGLISH(US) 中文(Chinese)

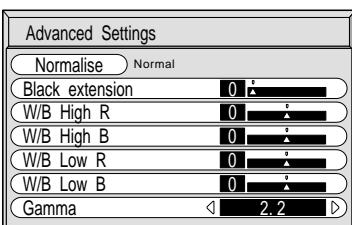


On-Screen Menu Display from Remote Control

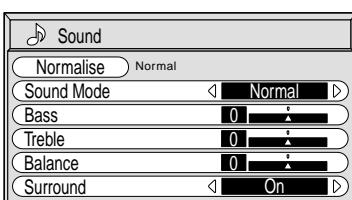
To Picture adjust menu
(see page 28)



To Advanced Settings
(see page 28, 29)

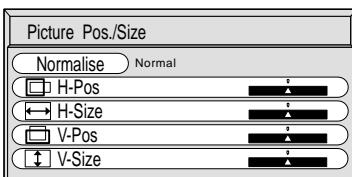


To Sound adjust menu
(see page 26)

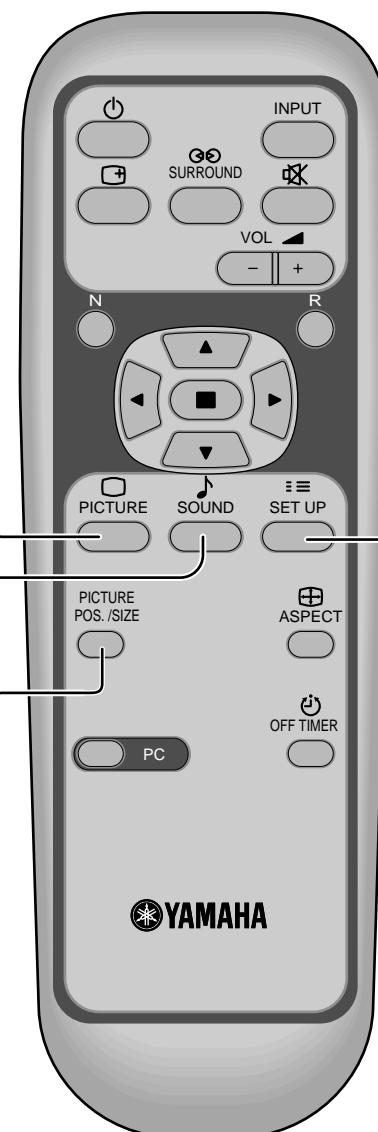
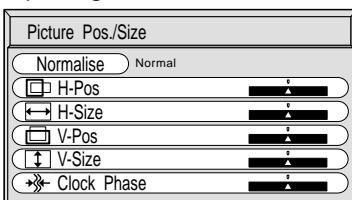


To Picture Pos./Size adjust menu
(see page 24)

During "AV(S Video)" and "Component" input signal modes.



During "RGB" and "PC" input signal modes.



Press to select each item.

